

## ABSTRACT

An excitation control circuit for suitably exciting a solenoid while current consumption and heating are effectively reduced. The control circuit has a driving circuit for driving a coil of a solenoid in response to a pulse signal supplied from an external device; a counter-electromotive force absorbing circuit, inserted in a path of a return current of the coil, for absorbing counter-electromotive force produced by the coil; and a return current circuit, connected in parallel to the counter-electromotive force absorbing circuit, for intermittently bypassing the return current. The return current circuit may have a field effect transistor switched on according to a signal for defining the timing of bypassing the return current, where the current path of the transistor is connected between a positive electrode and a negative electrode of the coil.